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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,804	07/05/2001	Shi-Yue Qiu	P 0279249 PAT-002	2543
909	7590	10/21/2004	EXAMINER	
PILLSBURY WINTHROP, LLP			HOGAN, MARY C	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	

2123

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/897,804

Applicant(s)

QIU, SHI-YUE

Examiner

Mary C Hogan

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11-18-02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

#### DETAILED ACTION

1. This application has been examined.
2. **Claims 1-10** have been examined and rejected.

#### *Oath/Declaration*

3. The Oath/Declaration is objected to for the following reasons. It is noted that the application claims priority of prior US provisional applications. However, there is no claim for priority on the Oath/Declaration. A new Oath/Declaration is requested with the application number and filing date of priority documents are listed.

#### *Double Patenting*

4. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).
5. A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.
6. **Claims 1-10** are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of **Claims 1-10** of copending **Application No. 09902094**. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

#### *Drawings*

7. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention, and in particular, refers to Figures 1-13. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing.

***Claim Objections***

8. **Claims 6 and 10** are objected to because of the following. Appropriate correction is required.
9. **Claims 6 and 10** state the following: “translating the threshold for the variable to corresponding residual threshold for the residual of the variable”, however, the meaning of this claim is unclear from the claim language and the specification, specifically, referring to the word “translating”.

***Claim Interpretation***

10. **Claims 6 and 10** state the following: “translating the threshold for the variable to corresponding residual threshold for the residual of the variable”, however, the meaning of this claim is unclear from the claim language and the specification. This claim was interpreted to mean that the calculation of the threshold value for a variable includes the computation of a residual value.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
- A person shall be entitled to a patent unless –
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
12. **Claims 1-10** are rejected under 35 U.S.C. 102(b) as being anticipated by Husseiny (U.S. Patent Number 5,210,704), herein referred to as **Husseiny**.
13. As to **Claim 1**, **Husseiny** teaches: a system for early warning in an e-service management system, comprising:
- a statistical learning mechanism for performing statistical learning based on a plurality of data values of a variable to generate a statistical model characterizing the behavior of the variable (**column 10, lines 65-column 11, line 8, column 17, lines 22-31**, “knowledge based model”);
- an early warning mechanism for generating an early warning of threshold violation of the variable with respect to a threshold by predicting, based on the statistical model, a future time by which the values of the variable exceeds the threshold (**column 11, lines 44-52, column 18, lines 10-19, column 19, lines 11-13, column 22, lines 19-26**); and
- an operational mechanism for detecting abnormal behavior of the variable based on

both the statistical model and the early warning (**column 12, lines 46-53**).

14. As to **Claims 2,4 and 8**, **Husseiny** teaches: the system according to claim 1, wherein the statistical learning mechanism comprises:

an offline normal behavior modeling mechanism for modeling the regular behavior of the variable based on the plurality of values of the variable collected offline over a period of time (**column 4, lines 54-58, column 17, lines 57-60**); and

an online behavior modeling mechanism for modeling the dynamic behavior of the variable based on a plurality of values of the variable collected online during the operations performed by the operational mechanism (**column 4, lines 42-47, column 18, lines 23-25**).

15. As to **Claims 3 and 7**, **Husseiny** teaches: a method for early warning in an e-service management system, comprising:

modeling the behavior of a variable based on a plurality of data values of the variable collected over a period of time, said modeling being performed based on the statistical properties of the data values of the variable to generate a behavior model for the variable, the behavior model being represented using a plurality of model parameters (**column 4, lines 54-58, column 17, lines 57-60**);

generating an early warning for a threshold violation of the variable with respect to a threshold based on a plurality of data values of the variable collected online and the behavior model (**column 18, lines 10-16, 23-27, 39-41, 45-49, column 19, lines 11-13**);

detecting abnormal behavior of the variable according to the plurality of data values of the variable collected online and the early warning (**column 18, lines 45-49**).

16. As to **Claims 5 and 9**, **Husseiny** teaches: the method according to claim 3, wherein generating an early warning comprises:

computing a plurality of residuals at corresponding different time reference points in the future based on the model parameters (**column 12, lines 6-9, column 20, lines 21-28**);

deriving the variances of the plurality of residuals, predicted by said predicting (**column 12, lines 6-9, column 20, lines 21-28**);

estimating the probabilities for threshold violation of the variable with respect to said threshold at the corresponding different time reference points in the future (**column 18, lines 39-41, wherein the ratio of the new incipient failure index to the incipient failure index computes the probability of a threshold violation**); and

issuing an early warning for any of the time reference points at which the probability

for threshold violation of the variable exceeds a pre-determined value (**column 18, lines 45-53, column 19, lines 11-13**).

17. As to **Claims 6 and 10, Husseiny** teaches: the method according to claim 5, wherein the estimating the probabilities comprises:

translating the threshold for the variable to corresponding residual threshold for the residual of the variable (**column 18, lines 23-27, column 20, lines 14-27**, wherein the time series analysis is used to produce the new index, IFI for the new signals measured from sensors, and this time series analysis includes the calculation of the residual and the variance of the residual (see claim interpretation above));

calculating the probabilities for threshold violation of the residual with respect to the residual threshold at the corresponding different time reference points in the future (**column 18, lines 39-41**, wherein the ratio of the new incipient failure index to the incipient failure index computes the probability of a threshold violation, and the index calculation through time series analysis included the computation of a residual).

### ***Conclusion***

18. The prior art made of record, see PTO 892, and not relied upon is considered pertinent to applicant's disclosure, careful consideration must be given prior to Applicant's response to this Office Action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary C Hogan whose telephone number is 703-305-7838 until 10/28/04 or 571-272-3712 after 10/28/04. The examiner can normally be reached on 7:30AM-5PM Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on 703-305-9704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

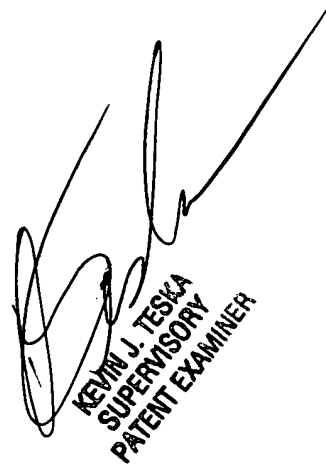
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Application/Control Number: 09/897,804  
Art Unit: 2123

Page 6

Examiner

Art Unit 2123



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